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Descriptive Catalogue of Photographs of North American Indians. By W. H. Jackson. Washington, 1877. Miscellaneous Publications, No. 9, of the U. S. Geological Survey of the Territories, F. V. Hayden in charge. Washington, D. C. 8°, pp. 124.

Paleontological Bulletin, No. 26. On some New or Little Known Reptiles and Fishes of the Cretaceous No. 3, of Kansas. By E. D. Cope. (Read before the American Philosophical Society, August 17, 1877.) 8°, pp. 20.

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GENERAL NOTES.

BOTANY.

Notes on the Alpine Flora of Mt. Shasta.—While looking for insects on the crater cone of Mt. Shasta, in Northern California, late in August, I hastily picked up examples of all the plants I could find at and above timber line, and at the lower edge of the limits of perpetual snow, which is said on this peak to be about 9000 feet above the sea. I was struck, though not a botanist, with the radical difference between the alpine (?) flora of Mt. Shasta and that of the Rocky Mountains and the White Mountains and the Alps of Switzerland. In the case of Mt. Shasta, which forms the northern terminus of the Sierra Nevada, the flora seemed much less alpine in its nature than was expected, and appeared to have been of local derivation from the foothills and plains below. I am indebted to Mr. Sereno Watson for naming the phænogams, to Prof. W. G. Farlow, for identifying the lichens, while Mr. Booth kindly named the Carex. No distinctive alpine insects occurred, only a wingless locust, which was also found lower down among the firs.—*A. S. Packard, Jr.*

Phænogams—*Silene grayi* Watson (ized.) (in flower); *Saxifraga tolmiei* T. & G. (in flower); *Applopappus bloomeri* Gray (in flower); *Senecio aureus* var. *borealis* (in flower); *Penstemon mensiesii* Hook (in flower); *Penstemon mensiesii* var. *douglasii* (in flower); *Elymus sitanion* Schult (in flower); *Polygonum shastense* Brewer (in flower); *Lupinus ornatus* Dougl. (in flower); *Bryanthus empitriformis* Gray; *Phlox douglasii* Hook. (in flower); *Erigonium morifolium* T. & G. (reduced form, in flower); *Erigonium pyrolæfolium* Hk. (in flower); *Ceanothus prostratus* Benth.; *Sedum glandulosum* Nutt; *Polymonium humile* Willd; *Gilia pungens* Benth. (in flower); *Hulsea nana* Gray (in flower); *Pinus albicaulis.*

Carex—breweri Booth.

Lichens—*Lecanora chlorophana, Lecanora rubina* var. *opaca? Lecanora glaucoma? Umbilicaria rugifera* Nyl.,

Production of Apples in "off" Years.—We have been informed by Mr. Elbridge Gerry, of Marblehead, Mass., that some twenty-five years ago the foreman of the Pickman Farm, in Salem, raised crops of apples in the "off" year, *i. e.*, the year they usually did not bear, by simply picking off the fruit buds in the bearing years. His neighbors could never understand how he was enabled to raise a fair crop each year, until finally the secret became known. This mode of artificial selection is quite new to us, and we would like to know if it has ever been practiced before in orchards.

In connection with this subject I am told by Mr. John Sears, of Danvers, Mass., that in old orchards deep ploughing, by which the roots are often torn and broken, carried on in the "even" years, will cause the young apples to fall off, so that they will bear the next year. Also picking off the apples on the young trees in the "even" years will cause the trees to produce in the "off" years. Still, adds Mr. Sears, none of these processes are perfectly sure.—*A. S. Packard, Jr.*

BOTANICAL NEWS.—The following articles appear in the *Annales des Sciences Naturelles*, for September 1877. J. Vesque, on the absorption of water by roots in its relation to transpiration. Sorokine, On the structure of *Crocysporium torulosum* (a microscopic fungus). J. Wiesner, Researches in regard to the influence of light and radiant heat upon transpiration in plants. Dehéran, A notice of the preceding memoir. Van Tighem, On the digestion of albumen. Fischer de Waldheim, On *Ustilagineæ* and their hosts.

Flora, No. 23, contains the following papers: W. Nylander, Remarks concerning gonidia and their different forms; No. 24, A. Wigand, On horn-prosenchyma; No. 25, Hugo de Vries, Concerning longitudinal epinastic (elongation of the internal surface of an organ); F. Arnold, The Musci of the French Jura; No. 26, Dr. H. Christ, Roses observed in 1876, de Thümen, South African Fungi; No. 27, Schulzer, Concerning certain Fungi; No. 28, Robert Caspary, Life of Alexander Braun.

Botanische Zeitung, No. 39, Dr. O. Drude, Selected examples to explain the formation of fruit in *Palmeæ* (continued and illustrated by plates in No. 40); No. 40, Prof. J. Baranetsky, On diurnal periodicity in the growth of internodes in length; Oudemans, Notices respecting certain Boleti. Many critical notes by the editors conclude the number. No. 41, Rostafinski and Woronin, On *Botrydium granulatum* (continued in No. 42). No. 42, Dr. Karl Goebel, History of the development of the Prothallium of *Gymnogramme leptophylla*, Desv.

A Botanical Section of the Peabody Academy of Science, Salem, consisting of about twenty members living in Salem and adjoining towns, has lately been formed there, bi-monthly meetings having been held. Dr. G. A. Perkins is Chairman, and Miss L. H. Upton, Secretary.

The nature of the Spermatia is discussed by G. Murray, in Trimen's *Journal of Botany*, for October.

The Nuovo Giornale Botanico Italiano, for October, contains a paper by O. Beccari, describing a new genus of the family Olacineæ; and the editor, T. Caruel, proposes a new classification of plants, the reasons for which are to be given in an unpublished work on vegetable morphology. The transactions of the Royal Swedish Academy for 1874 and 1875 (just received in this country), contains papers by Heer, on the miocene flora of Greenland; by Berggren, on the mosses and Hepaticæ of Spitzbergen, and also on the mosses of Disco Island, Greenland.

ZOÖLOGY.

Note on the Garter Snake.—While making some geological examinations on the bank of Lone Tree Creek in Colorado last summer, I started a common snake (*Eutænia,* sp.) upon the bank. It immediately took to the water, which was then about eighteen inches deep and had but little current, rested upon the surface and looked at me. I threw a stone which struck near it, when it immediately stretched itself upon the surface, gulped down into its lung a quantity of air, and immediately dived to the bottom and remained there. The mass of air it swallowed caused a distinct globular swelling of the body, which I saw pass along to the region occupied by the posterior end of the lung, where it remained, as I could distinctly see through the clear water, after it had reached the bottom. I then threw a broad, flat stone so that it fell upon the snake and held it fast, whereupon two or three large bubbles of air rose to the surface. I then lifted the stone from it with a stick, allowing it to escape, and as it did so I saw that the air-swelling had disappeared.

I infer that this is probably a habit with the snakes under such circumstances, but I was not aware of it before. In this case the air seems to have been intentionally passed back to the posterior, simple sac-like portion of the lung, where respiratory capillaries are few, to be passed forward to the more cellular anterior portion when the respiratory needs might require it.

The cellular character of the anterior portion of the lung would seem to have offered some impediment to the rapid swallowing of so much air, but I am sure it was so done in this case.—C. A. White, M. D.

Nesting of the Robin on the Ground.—An instance of this deviation from the usual conditions of nest-building came to my knowledge in May, 1875, near Vineland, New Jersey, where I found a nest of *Turdus migratorius* on the ground. It contained four eggs, and was not peculiar in structure. The nest was identified, as one of the old birds flew from it on my approach. I also saw a stump about a foot and a half high, on which I was informed that a pair of robins had nested.—H. W. Turner, Ithaca, New York.